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## Gas Pipe Plan Permit Submittal Requirements

The City of Westminster requires a gas pipe plan to be submitted for any new gas line work or when the input BTU/hr of a replacement appliance is greater than the appliance it is replacing. A copy of the City approved stamped plan must be onsite prior to the inspection.

If calculations are not provided with the online permit application, gas pipe sizing will be evaluated by the City in accordance with the capacity tables and longest-branch/branch-length methodologies. These methodologies are defined in Appendix AA of the 2021 IRC or Appendix A 2021 of the IFGC.

The conversion factor for BTU/hr to CFH is per 2021 International Fuel Gas Code, section A102.1, which reads: "To obtain the cubic feet per hour of gas required, divide the total Btu/h input of all appliances by the average Btu heating value per cubic feet of the gas. The average Btu per cubic feet of the gas in the area of the installation can be obtained from the serving gas supplier." Per Xcel Energy, the average BTU/hr heating value per cubic feet of gas for Westminster is 831 BTU/hr per CFH. The City is currently under the 2021 I-Codes which do not incorporate the use of an altitude derate factor.

Appendix AA of the IRC and Appendix A 2021 of the IFGC provide numerous examples of gas pipe plans and examples of how to size gas pipe. At a minimum, the gas pipe plan must provide the following information:

- Indicate the meter delivery pressure. Xcel Energy provides three pressures in Westminster, 6" W.C., 12" W.C. and 2 psi.
- Provide a drawing of the gas system. The drawing does not need to be an isometric nor does it have to be computer drawn.
  - If connecting onto an existing system, show the entire tree structure of the existing system.



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- If run as a separate feed from the meter (connection within 1 ft of meter), only the new line needs to be shown in its entirety. Do indicate where the branch to the existing portion of the gas pipe system ties in and note “existing house system” or similar.
- Provide the input BTU/hr data of each appliance that is connected to the same distribution system as the new appliance, and note this value on the plan adjacent to each appliance location. Do NOT show input values as CFH; do not convert BTU/h to CFH on the gas plan.
- Identify all pipe as to type (i.e. steel/ black iron, CSST, etc). If CSST, indicate the manufacturer.
- As an alternative, identify the total developed length from the meter to each and every appliance.
- Indicate the diameter of the pipe (ID).
- Indicate the address of the project and indicate the date of the drawing.
- If providing just the gas plan, provide a contact name and phone number on the gas plan.



# SAMPLE GAS PIPE PLAN

